

Notice of Allowability

Application No.

10/564,715

Examiner

Chih-Cheng Glen Kao

Applicant(s)

HEUSCHER, DOMINIC J.

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/30/07 and 9/12/07.
2. ☒ The allowed claim(s) is/are 1-17, 19, 20, 22-26, 28 and 29.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An extension of time under 37 CFR 1.136(a) is required in order to make an examiner's amendment which places this application in condition for allowance. During a telephone conversation conducted on September 25, 2007, Anthony M. Del Zoppo, III, requested an extension of time for one MONTH(S) and authorized the Director to charge Deposit Account No. 14-1270 the required fee of \$120.00 for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. The application has been amended as follows:

In claim 1, line 14, replace "x-ray outer" with --outer x-ray--.

In claim 1, last line, replace "representations." with

--representations;

wherein the first asymmetrically adjustable collimator has a fixed collimation edge that defines the second outer x-ray projection of the first radiation and an adjustable collimation edge that defines the first outer x-ray projection of the first radiation,

the second asymmetrically adjustable collimator has a fixed collimation edge that defines the second outer x-ray projection of the second radiation and an adjustable collimation edge that defines the first outer x-ray projection of the second radiation, and

each of the adjustable collimation edges moves between a first position at which the first and second radiation is symmetrical about the rotational center and at least one other position at which the first and second radiation is asymmetrical about the rotational center.--

In claim 4, line 4, replace "detector arrays" with --detectors--.

In claim 4, line 6, replace "detector arrays" with --detectors--.

In claim 15, line 6, replace "detector arrays" with --detectors--.

In claim 15, lines 7-8, replace "detector arrays" with --detectors--.

In claim 17, last line, insert --outside the central region-- after "the voxel".

Cancel claim 18.

In claim 19, line 2, insert a comma after "defining an examination region".

In claim 20, line 7, replace "x-ray outer" with --outer x-ray--.

In claim 22, line 4, in the phrase "second outer", replace "second" with --first--.

In claim 22, line 7, in the phrase "second outer", replace "second" with --first--.

In claim 26, line 4, insert a comma after "central projections".

In claim 26, line 5, delete "the measuring".

In claim 26, line 7, insert a comma after "surrounding projections".

In claim 26, line 8, delete "the measuring".

In claim 26, line 10, delete "and".

In claim 26, after line 10 and before line 11, insert

-- passing second radiation through the examination region;
measuring central projections, corresponding to rays of second radiation
that intersect the central region, using a second high-resolution detector array that
has the first spacing of detector elements;
measuring surrounding projections, corresponding to rays of second
radiation that intersect the surrounding region without intersecting the central
region, using a second low-resolution detector array that has the second spacing
of detector elements; and--

In claim 26, line 12, insert --and the second radiation-- after "to the first radiation".

In claim 26, line 14, insert --the-- before "central projections".

In claim 26, line 14, after "central projections", insert --corresponding to the first
radiation and the second radiation--.

In claim 26, line 16, insert --the-- before "central and surrounding".

In claim 26, line 17, before "during reconstructing", insert --corresponding to the first
radiation and the second radiation--.

In claim 26, last line, insert --radius-- after "transition".

Cancel claim 27.

In claim 28, line 1, in the phrase "set forth in claim 27", replace "27" with --26--.

In claim 29, line 1, in the phrase "set forth in claim 27", replace "27" with --26--.

Cancel claim 30.

Cancel claim 31.

Reasons for Allowance

3. Claims 1-17, 19, 20, 22-26, 28, and 29 are allowed. The following is an examiner's statement of reasons for allowance.

4. Regarding claim 1, the prior art fails to disclose or fairly suggest a computed tomography imaging system, including wherein a first asymmetrically adjustable collimator has a fixed collimation edge that defines a second outer x-ray projection of first radiation and an adjustable collimation edge that defines a first outer x-ray projection of the first radiation, the second asymmetrically adjustable collimator has a fixed collimation edge that defines a second outer x-ray projection of second radiation and an adjustable collimation edge that defines a first outer x-ray projection of the second radiation, and each of the adjustable collimation edges moves between a first position at which the first and second radiation is symmetrical about the rotational center and at least one other position at which the first and second radiation is asymmetrical about a rotational center, in combination with all of the other limitations in the claim. Claims 2-17 are allowed by virtue of their dependency.

5. Regarding claim 19, the prior art fails to disclose or fairly suggest a computed tomography imaging system, including a single unitary radiation detector array including: a central high resolution portion defined by high resolution portions of first and second radiation detector arrays, a first outer low resolution portion defined by a low resolution portion of the first radiation detector array, and a second outer low resolution portion defined by a low resolution

portion of the second radiation detector array, wherein the central high resolution portion is arranged between the first and second outer low resolution portions, in combination with all of the other limitations in the claim. Claims 20 and 22-25 are allowed by virtue of their dependency.

6. Regarding claim 26, the prior art fails to disclose or fairly suggest a computed tomography imaging method, including wherein reconstructing includes combining 90° contiguous angular segments of central projections corresponding to first radiation and second radiation during reconstructing of voxels within a central region, and 180° contiguous angular segments of central and surrounding projections corresponding to the first radiation and the second radiation during reconstructing of voxels in a surrounding region outside a transition radius, in combination with all of the other limitations in the claim. Claims 28 and 29 are allowed by virtue of their dependency.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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